7

operation step 162 is also provided in this embodiment and a cover sensor 20 detects when the front cover is opened at step 164. When this occurs, a timer is started at step 166, and following this the motor is incrementally energized to move the actuator to the loading position at step 168. Although any time period can be set, in an exemplary embodiment a time period of five seconds may be used. In this embodiment, the motor shaft is uni-directional. In other words, the motor is not

At step 170 the controller inquires as to whether the timer has expired or not. If the timer has not expired then at step 170 the controller inquires as to whether the actuator is at the loading position or not as determined by the actuator. If it is determined that the actuator is not at the loading position, 15 then the methodology at step 174 requires the user to remove the refill container. Upon completion of step 174 the methodology returns to step 168 and the motor is incrementally energized to move the actuator, and steps 170 and 172 are repeated. If at step 170 it is determined that the timer is 20 expired, then the controller turns the motor off at step 178. Alternatively, if at step 170 it is determined that the timer has not expired, but that the actuator is at the loading position at step 172, then the motor is turned off. Upon completion of step 178 the process, at step 180, returns to main operation 25 when the front cover is closed as determined by the sensor 20.

This methodology is advantageous in that the dispensing system can be configured to automatically jog or rotate the motor shaft upon opening of the front cover. The motor then gives power somewhat continuously until the actuator is 30 returned to the proper position. If the pump is stalled, the actuator will not return to its loading position until the stalled pump and refill container are removed. If the pump is not stalled, then the motor shaft rotates and then shuts off since the actuator is in the correct position from the last cycle of the 35 pump actuator. Regardless of whether the pump was stalled or not, the actuator would be left in the proper position to accept a new refill container. The timer feature prevents battery drain

In still another embodiment shown in FIG. 6, a methodol- 40 ogy is designated generally by the numeral 200. A main operation step 202 is also provided in this embodiment, but in contrast to the other embodiments, does not require the opening of a cover. Instead, at step 204, the hand sensor 24 detects the presence of an object such as a user's hand. When this 45 occurs, at step 206 a pump actuation cycle is started. This is initiated by the controller 56 receiving an indication of the presence of an object by the sensor 24 and initiating rotation of the reversible shaft 27 by the motor 26. As in the previous embodiments, rotation of the shaft engages the linkage 44 and 50 begins actuation of a dispensing cycle. During the dispensing cycle, the controller 56 monitors the current sensor 28 to detect the amount of current drawn by the motor 26. At step 210 the controller periodically monitors the amount of current drawn by the motor as determined by the sensor 28. If the 55 sensor 28 does not detect a current overload or other abnormality at step 210, then at step 212 the controller 56 continues with the dispensing cycle operation at step 212 and upon completion thereof returns the operation to the main operation step 202.

However, if at step 210 a current overload or other motor operating abnormality is detected such as by detecting a predetermined level of current or any amount of current over the predetermined level of current, then the controller 56 instructs the motor 26 to reverse the rotational direction of the shaft 27 so as to return the actuator, via the linkage 44 from an actuating or other intermediate position, to a loading position

8

as determined by the position sensor 46. Upon completion of step 214 the process returns to the main operation at step 202.

This methodology is advantageous in that the system can be configured to automatically reverse motor direction upon detection of the motor drawing an abnormal or excess amount of current. It is presumed that the drawing of an abnormal amount of current is an indication that there is some type of interference with the linkage mechanism and/or the pump actuator 40 that prevents a full completion of an operational cycle. Such a feature does not require the use of a cover sensor or key reader component as in the other embodiments and provides a simpler method of reversing a stalled pump in comparison to the other embodiments while still providing the same desired benefits.

Accordingly, based on the foregoing methodologies it will be appreciated that various scenarios can be utilized to reset the pump actuator to a loading position so that a stalled pump can be easily corrected without damage to the refill container or the occurrence of undesired dispensing events. This saves on loss of fluid from the refill container and also prevents possible damage to the operating mechanism of the dispensing system.

Thus, it can be seen that the objects of the invention have been satisfied by the structure and its method for use presented above. While in accordance with the Patent Statutes, only the best mode and preferred embodiment has been presented and described in detail, it is to be understood that the invention is not limited thereto or thereby. Accordingly, for an appreciation of the true scope and breadth of the invention, reference should be made to the following claims.

What is claimed is:

- 1. A method for resetting a stalled pump in a fluid dispensing system, the method comprising:
 - detecting the presence of a user's hand to start a pump actuator associated with a refill container;
 - monitoring a current sensor associated with a motor that actuates said pump actuator by rotating a motor shaft in a first direction; and
 - reversing said motor shaft in a second direction to return said pump actuator to a starting position when said current sensor detects a predetermined level of current.
 - The method according to claim 1, further comprising: sensing a position of said pump actuator with a position sensor; and
 - stopping reversal of said motor shaft in said second direction when said pump actuator returns to a loading position
 - The method according to claim 2, further comprising: completing a dispense cycle by said pump actuator if said current sensor does not detect said predetermined level of current.
 - 4. A dispensing system comprising:
 - a refill container filled with product;
 - a housing adapted to accept said refill container;
 - a pump maintained by either said refill container or said housing so as to dispense product from said refill container, wherein said pump has a loading position and a dispensing position; and
 - a mechanism associated with said pump wherein said mechanism is configured to automatically return said pump to said loading position when a stall condition is detected.
- 5. The system according to claim 4, wherein said mecha-65 nism comprises
 - a controller connected to said pump;
 - a hand sensor connected to said controller;